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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/825,534 03/28/97 YOUNG

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EXAMINER

LM02/1209

FISH AND RICHARDSON
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WASHINGTON DC 20005

LERNER, M	
ART UNIT	PAPER NUMBER

2741

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/825,534

Applicant(s)
Young et al.

Examiner
Martin Lerner

Group Art Unit
2741



☒ Responsive to communication(s) filed on Nov 24, 1998

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-30 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-30 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

Art Unit: 2741

DETAILED ACTION

Information Disclosure Statement

1. A copy of the White reference, U.S. Patent No. 5,386,494, has not been found among the references submitted by Applicants. Thus, this reference has not been considered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 to 30 are rejected under 35 U.S.C. 102(b) as being anticipated by *Roberts et al.*

Roberts et al. discloses a method of editing text after a document is created by a voice recognition system, as in claims 1 and 25. See column 4, lines 7 to 30. Figure 2 shows how recognition result tokens are initially formed from an utterance. The EDITMODE commands are correction commands that generate corrected text from incorrect text. See Figure 1. Correction commands are produced by the user by selecting a correct spelling from a displayed list in a variety of possible ways, including, voice commands, function keys and start spellings. See column 21, line 61 to column 22, line 9. A list of similar sounding words is displayed in a pop-up window 701 from a phonetic dictionary 500 of confusingly-similar entries. See Figure 15.

Art Unit: 2741

Specifically, with respect to claim 1:

(I) performing speech recognition on an utterance to produce a recognition result . . .

Figure 2 of *Roberts et al.* shows speech recognition being performed on a signal from microphone 811, and forming a token (step 118), i.e. recognition result, from a detected utterance (step 115).

(ii) identifying a correction command in the recognition result for the utterance . . .

Figure 1 of *Roberts et al.* shows that after an utterance is detected (step 111) and formed into a token, a variety of correction commands, e.g. DELETE CMD. (step 106), PICKCHOICE CMD. (step 107), LETTER CMD. (step 109), and EDITCHOICE CMD. (step 110) are identified for the utterance.

(iii) producing corrected text from a portion of the recognition result for the utterance.

Figure 18 of *Roberts et al.* shows an example of this where LETTER CMD. (step 109) is used to produce corrected text. See column 25, line 60ff.

Roberts et al. anticipates claims 2, 3, 7, 17 because that reference is clearly directed to correction of incorrectly spelled words.

Similarly, with respect to claim 25:

(I) performing speech recognition on an utterance to produce recognition results . . .

Figure 2 of *Roberts et al.* shows speech recognition being performed on a signal from microphone 811, and forming a token (step 118), i.e. recognition result, from a detected utterance (step 115).

Art Unit: 2741

(ii) identifying a spelling command in the recognition results, wherein the spelling command indicates that a portion of the utterance comprises a spelling . . .

Figure 2 of *Roberts et al.* shows that when EDITMODE is entered (steps 109 or 110), the user can enter a letter command either by speaking a letter or pressing a letter key to, for example, add a letter to the beginning or ending of a word. See column 20, lines 1 to 10.

(iii) producing the spelling by searching a dictionary using the recognition results.

Roberts et al. goes on to say that after the user has selected a letter command by entering an initial string of letters corresponding to the desired word, the active vocabulary is restricted (step 266) to those words beginning with those letters. Then, a list of likely words starting with those letters is retrieved from a backup dictionary (step 268) and displayed along with the initial string specified by the user (steps 270 and 272). See column 20, line 20 to column 21, line 35.

Roberts et al. clearly contemplates correcting a plurality of incorrect results from a plurality of utterances, as in claims 4 to 6. In this context, an “utterance” may be a phoneme, word, or sentence. Since *Roberts et al.* uses a context-dependent grammar and bigram models, any correction of an utterance will affect the probability of both the preceding and succeeding utterances. See column 13, lines 50ff. and column 19, lines 1 to 11. Thus, *Roberts et al.* takes into account instances where the first utterance precedes the second utterance, and vice versa.

At column 24, lines 59 to column 25, line 9, *Roberts et al.* states that “rerecognition” occurs whenever the user types a few letters of the corrected word and pauses, whereupon the

Art Unit: 2741

system automatically displays a list of corrected choices for the word inputted so far, as in claims 12 to 16.

Phonemic dictionary 500a of *Roberts et al.* is a “confused pronunciation dictionary” as in claims 8 to 11, and dictionary 500 is a “confused spelling dictionary,” as in claims 18 to 23 and 26 to 30. See column 18, line 43 to column 19, line 11. Word entries 504a in phonemic dictionary 500a are spelled according to phonemic symbols 506. An acoustic model of words represented by phonemic symbols lists associates words based upon confusingly similar sounds. This prior art method utilizes both active and backup phonetic dictionaries or vocabularies, as in claim 24. See column 20, lines 36 to 62.

Response to Arguments

4. Applicant's arguments filed November 24, 1998 have been fully considered but they are not persuasive.

Regarding claim 1, Applicants' representative contends that *Roberts et al.* does not describe identifying both a correction command and corrected text in an utterance. At the outset, Applicants' comments with respect to “an utterance” and “a recognition result for the utterance” assume too restrictive an interpretation of these terms. Broadly speaking, “an utterance” may be construed to be dictation of original text as well as correction commands with associated corrected text. “Recognition results” are seamlessly produced for both dictation of original text and correction commands in the dictation system of *Roberts et al.*

Art Unit: 2741

Assuming *arguendo* Applicants' narrow interpretation of "an utterance" as referring only to correction commands and associated corrected text, *Roberts et al.* still anticipates these claims.

Firstly, in TEXTMODE, *Roberts et al.* describes the correction command "starts_alpha." See column 19, line 57 to column 20, line 6. Correction command "starts_alpha" is an utterance that includes both a correction command "start" and associated corrected text "alpha." A user initiates correction of a word in TEXTMODE by uttering "starts_alpha," and the dictation system recognizes the "starts" command as identifying that the word at the current cursor is corrected to begin with the letter "a." The dictation system automatically enters EDITMODE, whereupon the user continues to correct the spelling of the current word by uttering the second letter. Thus, if the user now utters "beta" in EDITMODE, the dictation system uses the first letter "a" ("alpha") and the second letter "b" ("beta") to produce corrected text "about," "abut," etc. The "utterance" of the corrected spelling seamlessly continues between TEXTMODE and EDITMODE as the user speaks successive letters.

Secondly, the "backspace" command of *Roberts et al.* anticipates the claimed limitations. See column 20, lines 10. In EDITMODE, a user utters the word "backspace," the dictation system performs speech recognition on the word "backspace," and identifies "backspace" as a correction command. The dictation system then identifies "corrected text" by deleting the last letter of the current cursor position. Similarly, "corrected text" is produced by recognizing an utterance of "delete" in the delete command of step 106. See Figure 1. Both the "backspace"

Art Unit: 2741

and “delete” commands are utterances recognized as correction commands and also identify associated corrected text.

Regarding claim 25, Applicants’ representative contends that neither the letter commands (i.e. “starts_alpha”) nor the edit commands (e.g. “backspace”) of *Roberts et al.* includes a spelling command and a ‘portion’ that may be used to search a dictionary to produce a spelling. This is respectfully traversed for the letters commands. Tracing through the flowchart of Figure 1 of *Roberts et al.*, if the STARTSTRING command is uttered in TEXTMODE, the utterance “starts_alpha” is detected (step 111), stored (step 119), and recognized to produce a recognition result (steps 121, 123). Then, “starts_alpha” is identified as a letter command (step 109), where “starts_alpha” includes a ‘portion’ of the spelling, i.e. the word begins with “alpha” or the letter “a.” After automatically entering EDITMODE (step 260), the letter is added to the word (step 262), restricted to a corrected word by searching the vocabulary dictionaries (steps 266, 268), and candidate spelling are displayed in the window (step 270). Restriction by the active and backup vocabularies (steps 266, 268) meets the limitation of producing the spelling by searching a dictionary using a recognition result from a “starts_alpha” command.

Thus, *Roberts et al.* anticipates claims 1 and 25.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2741

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Martin Lerner* whose telephone number is (703) 308-9064.

The fax phone number for the organization where this application or proceeding is assigned is (703) 305-9508.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4800.

Application/Control Number: 08/825,534

Page 9

Art Unit: 2741

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December 7, 1998



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